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Mind the Gap: Disparities in Assessments of Living Standards Using National Accounts and Surveys

Abstract: Average per capita consumption (or income) from national accounts data can differ substantially from corresponding measures from household surveys. Using a new compilation of 1,139 household surveys matched to national accounts data, we find the gap between the data sources is larger and more robust than previously established. Survey means, on average, are 25% percent lower than corresponding means for household consumption from national accounts. The gap is largest in middle income countries, where also annualized growth rates for surveys are more than 1 percentage point slower than growth in national accounts, on average. We show how the gaps matter substantially for assessments of growth, poverty and inequality. Under the assumption that the gap, fully or in part, originates from the inability of surveys to fully capture consumption of the richest, traditional measures of poverty decline may be overstated and inequality understated. Notably, adjusted measures of inequality provides much stronger support for the cross-sectional 'Kuznets' relationship with inequality first rising and then falling with development.

Introduction: Measures of per capita income and consumption are among the most frequently cited indicators of economic development. They are widely used in assessments of economic growth, poverty and inequality, both within and between countries. Despite the prominence of these indicators, the two most common data sources for such measures – national accounts systems (NAS) and household surveys (HHS) – often give conflicting estimates of average living standards and growth. For example, in Pakistan in 2013, national accounts data suggest that average household consumption expenditure per capita was $9.5 per day at 2011 PPP, while the household survey suggests it was less than half of that, $4.4 per day at 2011 PPP. In Rwanda, the two most recent household surveys suggest average consumption contracted at an annualized rate of 0.6 percent between 2010 and 2013, while household final consumption expenditures (HFCE) from national accounts indicated a robust expansion of household consumption at an annualized rate of 4.1 percent over the same period.

That national accounts data and survey data can lead to such diverging measures of the levels and rate of change of living standards is a recurring phenomenon across a wide range of countries and statistical systems. A frequently cited country-case is India, where there has been large discrepancy between measures of household consumption expenditure in national accounts and those in the National Sample Survey (NSS), fueling a vigorous debate about the evolution of poverty and its relationship to economic growth (see for example Deaton and Kozel, 2004; Subramanian and Jayaraj, 2015; Sundaram and Tendulkar, 2003). In the United

States, per capita income from the two large national surveys, the Current Population Survey and the Consumer Expenditure Survey, are known to diverge from national accounts. Ravallion (2003), Karshenas (2001, 2003) and Deaton (2005) assessed the discrepancies globally with a sample of household surveys and national accounts data from 1980s and 1990s. Since these assessments, the availability of household survey data in poor countries has expanded considerably and many countries have revised both survey and national accounts data and methods.

The objective of this paper is two-fold: First, using a larger compilation of NAS and HHS data, with broader geographic and temporal coverage, we revisit the NAS-HHS gap and the findings of Ravallion (2003) and Deaton (2005). Second, we illustrate how the discrepancies can lead to divergent representations of how living standards, poverty and inequality, differ between countries and over time. We compile a dataset of 1,139 household survey means from 162 countries surveys matched to corresponding national accounts aggregates.

Overall, our findings suggest that discrepancies are even larger than found by both Ravallion (2003) and Deaton (2005). On average, across all countries, we find that survey means are about three-quarters of means of household consumption from national accounts, and about half of gross domestic product (GDP). Furthermore, the size of the gap varies systematically with economic development with the discrepancy being largest for middle income countries. In contrast to previous assessments of the gaps, we find relatively small differences between income and consumption surveys across all levels of development. This also means that the gaps for income and consumption surveys are similar, which challenges Ravallion's (2003) suggestion that the gap is mainly due to underreporting of incomes in surveys. In contrast to Deaton (2005) and Karshenas (2003), we find that the gap is narrowing as countries get richer for both income and consumption surveys, possibly reflecting better integration of NAS and HHS data, and better capture of rich households, in high income countries in recent year. We also find that growth rates from national accounts are higher than survey growth, particularly in middle income countries, in line with the economic gradient in the gaps in levels.

We the assess potential implications of the observed gaps for measures of global poverty and inequality. On the one hand, under the assumption that the gap is a result of surveys' (proportional) underestimation of the full extent of household incomes and consumption, one could justify distribution neutral adjustments of distributions by using national accounts means, in line with the methods used by Bhalla (2002), Sala-i-Martin (2006) and Pinkovskiy and Sala-i-Martin (2009; 2016). Such adjustments generally show that both global poverty and inequality is lower and falling faster than survey measures would suggests. On the other hand, assuming that the gap is (at least partly) due to surveys not appropriately capturing consumption and income of the richest households would justify adjustments of top incomes proportional to the NAS-HHS gap, as proposed by Lakner and Milanovic (2016) and Chandy and Siedel (2017). Such

adjustments have little effect on global poverty measures, but substantially revises upwards both global and national inequality, and significantly changes our understanding of the distributional nature of growth. Notably, the relationship between observed levels of inequality and overall economic development changes significantly, strengthening evidence of a cross-sectional Kuznets curve where inequality first rises and then falls with economic development. Full draft paper available.